

### REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 11-22 are presently active in this case, Claims 1-10 cancelled and Claims 11-22 added by way of the present amendment.

In the outstanding Office Action, Claims 1, 2, 4, 6, 8 and 9 were rejected under 35 U.S.C. § 103(a) as being obvious over WO 01/86885 to Koistinen in view of U.S.

2003/0108015 to Li, and Claims 7 and 10 were rejected under 35 U.S.C. § 103(a) as being obvious over Koistinen and Li, and further in view of WO 00/10357 to Haumont et al.

Turning now to the merits, in order to expedite issuance of a patent in this case, Applicants have cancelled Claims 1-10 and added new Claims 11-22 which clarify the patentable features of the present invention over the cited references. Specifically, Applicants' Claim 11 recites a radio access network system for transferring user data in a radio access network including a base station configured to communicate the user data with a mobile station via a radio channel and a control apparatus configured to control the base station. The mobile station is configured to transmit a transfer path setting request for requesting to set a transfer path of the user data, to a core network via the radio access network. The control apparatus includes a receiving unit configured to receive a transfer path assignment request for requesting to assign the transfer path of the user data from the core network, and includes a transfer path setting unit configured to set the transfer path of the user data in accordance with the transfer path assignment request. The control unit also includes a priority setting unit configured to set a priority with which the user data is transferred over the transfer path of the user data set by the transfer path setting unit, and a transmitting unit configured to transmit, to the base station, a

radio channel setting request for requesting to set the radio channel, the radio channel setting request including the priority.

Thus, Applicants' Claim 11 recites that the priority setting unit is configured to set a priority at which the user data is transferred over the transfer path set by the transfer path setting unit of the control apparatus. Independent Claims 20, 21 and 22 recite similar features in method, system and control apparatus format. As discussed in Applicants' specification, because TOS formats are different among IP packets and network nodes differ in the format that can be handled by the network node, priority transmission control of IP packets cannot be carried out in conventional systems.<sup>1</sup> Applicants' invention as claimed in independent Claims 11, 20, 21 and 22 can set the priority of the user data when setting the transfer path connection.

An example embodiment covered by Applicants' independent Claims 11, 20, 21 and 22 is shown in Figures 2A and 2B in Applicants' specification as originally filed. As seen in these figures and text relating thereto, when setting up a communication path a core network receives a message from a mobile station indicating a traffic class for user data that the mobile station wants to transfer to the core network.<sup>2</sup> The control apparatus then determines a priority by looking up a priority corresponding to the received traffic class in a priority determination table T1, for example. The control apparatus sets priority information in memory tables such as T2 and T3 for example.<sup>3</sup> When user data is subsequently sent from the mobile station to the network, the network regenerates a packet including the user data and replaces an existing TOS field with a bit code representative of the priority previously set.<sup>4</sup> In this way, the radio access network can adapt to an environment in each network

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<sup>1</sup> See Applicants' published specification at paragraph [0014].

<sup>2</sup> See Applicants' specification at paragraph [0072].

<sup>3</sup> See Applicants' specification at paragraphs [0077]-[0078].

<sup>4</sup> See Applicants' specification at paragraphs [0089]-[0093].

domain and can carry out the priority transmission control of IP packets in consideration of traffic requirements.<sup>5</sup>

The cited reference to Koistinen discloses a classification device that provides DiffServe compatibility to radio access networks that do not otherwise provide DiffServe compatibility.<sup>6</sup> As seen in Figure 1 of Koistinen, the classifying device 6 is placed at an input or output of a device where the IP layer is terminated, thereby allowing conversion to DiffServe protocol between dissimilar networks. As seen in Figure 3, the classification device simply converts a classification protocol such as AMR in the example of Figure 3, to a DiffServe compatible classification, such as a Real-Time (RT) or Non-Real-Time (NRT) classes as shown in Figure 3. However, Koistinen does not disclose that the network system can set the priority of the user data when setting a transfer path connection as required by independent Claims 11, 20, 21 and 22.

The secondary references to Li and Haumont et al. do not correct the deficiency of Koistinen. Specifically, Li discloses a system for QoS management across mobile IP networks. As pointed out by the Office Action, the system includes an NOC Policy Server in Figures 1 and 2, which provides a centralized location for layer QoS mapping on the network. In general, the NOC Policy Server pushes appropriate rules to various nodes of the network to ensure consistent mapping from UMTS layer QoS to IP layer QoS across the mobile network. However, the NOC Policy Server does not set the priority of the user data when setting a transfer path connection. In this regard, Applicants note that the outstanding Office Action cites Li for the field information notifier previously recited in the independent claims 1 and 2. Similarly, the Office Action cites Haumont et al. for teaching QoS flags indicating delay, throughput, reliability and cost priorities, and this references also does not disclose setting the priority of the user data when setting a transfer path connection.

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<sup>5</sup> See Applicants' specification at paragraph [0015].

<sup>6</sup> See Koistinen at page 3, lines 15-30.

For the reasons discussed above, independent Claims 11, 20, 21 and 22 patentably define over the cited references. As Claims 12-19 depend from Claim 11, these claims also patentably define over the cited references. Nevertheless, Applicants submit that these dependent claims provide a further basis for patentability over the cited references.

Specifically, Claims 12 and 13 recite that the priority is set based on a traffic class, and Claim 14 recites that priority is set by referring to a priority determination table. Independent Claim 11 similarly recites setting priority in accordance with a traffic class. As noted in the July 30, 2007 response, Koistinen relates to converting traffic classes to a common DiffServe protocol, while the disclosed invention is directed to using such traffic classes as a basis for setting priority information, and then adding priority bit codes to the IP packets based on the set priority information. Thus, Koistinen does not disclose setting priority information based on a traffic class as recited in Claims 11-14. Further, Koistinen does not disclose adding the priority to a packet as recited in Claims 15-17. Finally, Koistinen does not disclose specifying priority by referring to a transfer table as recited in Claims 18-19. The secondary references do not correct these deficiencies, and thus Claims 12-19 provide additional bases for patentability over the cited references.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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